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Practitioner's Docket No. 100349.0055US1 ***PATENT***

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: DennisChancellor, James H. Jensen

Application No.: 10/019,066 Group No.: 1723
Filed: 06/24/2002 Examiner: K. Menon
For: Filtration Using Pressure Vessel With Multiple Filtration Channels

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TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION--37 C.F.R. § 1.192)

1. Transmitted herewith, in triplicate, is the response to Notice of Non-Compliant Appeal Brief issued on April 1, 2005.

2. EXTENSION OF TERM

The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136 apply.

CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10*

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** Only the date of filing (' 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under ' 1.8 continues to be taken into account in determining timeliness. See ' 1.703(f). Consider "Express Mail Post Office to Addressee" (' 1.10) or facsimile transmission (' 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.*

Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

3. TOTAL FEE DUE

The total fee due is:

Appeal brief fee	$0.00
Extension fee (if any)	$0.00

TOTAL FEE DUE $0.00

4. FEE PAYMENT

The fees for filing the Appeal Brief were paid in the previous submission on February 14, 2005. However, if any additional extension and/or fee is required, and if any additional fee for claims is required, authorization is hereby give to charge Deposit Account No. 502191.

Date: 4/26/05

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

EXAMINER:	Krishnan S. Menon
APPELLANT:	Dennis Chancellor
SERIAL NO.	10/019,066
FILED:	June 24, 2002
FOR:	Filtration Using Pressure Vessel With Multiple Filtration Channels
ART UNIT	1723

MS Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Attention: Board of Patent Appeals and Interferences

APPELLANT'S BRIEF UNDER 37 CFR § 1.192

This brief, transmitted in triplicate, is submitted in response to a notification of non-compliant appeal brief dated April 1, 2005.

This brief contains the following items under the headings in the order here indicated:

I. Real Party In Interest

II. Related Appeals And Interferences

III. Status Of Claims

IV. Status Of Amendments

V. Summary Of Claimed Subject Matter

VI. Grounds Of Rejection To Be Reviewed On Appeal

VII. Argument

VIII. Claims Appendix

IX. Evidence Appendix

X. Related Proceedings Appendix

I. Real Party In Interest

The real party in interest is Dennis Chancellor.

II. Related Appeals And Interferences

There are no other appeals or interferences in this matter known to appellant.

III. Status Of Claims

There are 16 claims in this case. The claims on appeal are 1-3 and 6-18.

IV. Status Of Amendments

A response to the final Office Action dated May 05, 2004 was filed on July 6, 2004. In the response, claims were not amended so there are no unresolved claim amendments.

V. Summary Of Claimed Subject Matter

Claims 1 and 17 are the only independent claims involved in this appeal.

Claim 1 is directed toward a filtration system (Fig. 1, 10) in which an elongated outer casing (Fig. 2, 210) houses a plurality of elongated inner casings (Fig. 2, 220A-G), which in turn house a plurality of filters (membranes) (Fig. 5, 551, 552) . The outer casing, inner casings, and filters are disposed relative to one another to define a feed fluid flow path in which a feed fluid that entered an inner casing via an upstream inlet (Fig. 5, 524), and is exiting from an upstream filter (Fig. 5, 551) into a downstream filter (Fig. 5, 552), is diluted by additional feed fluid flowing into the inner casing through a downstream inlet (Fig. 5, 557).

Claim 17 is directed toward a filtration system (Fig. 1, 10) comprising an elongated outer casing (Fig. 2, 210) defining an outer lumen and a plurality of elongated inner casings (Fig. 2, 220A-G), at least one of which having an inner lumen within which an upstream (Fig. 5, 551) and a downstream (Fig. 5, 552) filter are disposed. The filters are disposed such that all of the waste fluid exiting the upstream filter along path 541D (Fig. 5) is directed as a feed fluid into the downstream filter. The waste fluid exiting the upstream filter is also supplemented by additional

feed fluid entering the inner lumen through a downstream inlet (Fig. 5, 557) at a point between the upstream filter and the downstream filter (Fig. 5, 555).

VI. Grounds Of Rejection To Be Reviewed On Appeal

The ground of rejection to be reviewed on appeal is the rejection of claims 1, 6-10, and 13-18 as being unpatentable over Call (U.S. Patent No. 4,083,780) pursuant to 35 USC § 103.

VII. Argument

First ground of rejection: Unpatentable over Call. All claims argued together.

A downstream inlet is not enabled by Call

Claims 1, 6-10, and 13-18 were rejected under 35 U.S.C. § 103 as being obvious over Call (U.S. Pat. No. 4,083,780). In declaring the claims to be obvious, the examiner held that the element of a downstream inlet was inherent in Call. The examiner's position can be summarized as follows, with reference to the attached figures:

1. Call teaches a system of membranes with a brine seal (Figure 1).

2. Call states in passing that a brine seal can be omitted (Figure 2).

3. A downstream inlet (Figure 3) is inherent in the teachings of Call when a brine seal is omitted.

In the response to the Office Action of May 5, 2004, the appellant pointed out that Call was a non-enabling disclosure for the element of a downstream inlet. In that regard the applicant previously argued "[r]eferences relied upon to support a rejection for obviousness must provide an enabling disclosure. That is to say, they must place *the claimed invention* in the possession of the public." *Beckman Instruments, Inc. v. LKB Produkter AB* 892, F.2d 1547 (Fed. Cir. 1989), *emphasis added.* The key here is not whether Call discloses an enabling device – but whether Call's disclosure is sufficient to enable the invention as currently claimed on appeal. In that respect Call utterly fails to teach how to make and use a downstream inlet *within the context of a multi-filter system.*

The examiner's response to the non-enablement argument was that Call disclosed that the brine seals were optional. The entire disclosure in that regard is "[a]lthough it is preferable that all feed fluid be directed through the spiral wrap elements, this feature is not absolutely mandatory and brine seals may be omitted in some applications." The examiner's argument is non-availing because it fails to teach the claimed invention. Specifically, the disclosure fails to teach one of ordinary skill in the art how to create a system where feed can exit an upstream filter and be diluted by additional feed before entering a downstream filter (as currently claimed).

The present claims require a downstream inlet in which feed fluid *(a) exits an upstream filter; (b) passed into a downstream filter, and(c) in the process is diluted by additional feed fluid flowing into the casing through a downstream inlet.* An embodiment of Call without the brine seals (see Figure 2), fails enable that claimed subject matter because there is no fluid exiting the upstream filter. . Instead, the absence of brine seals ensures that the pressure in the inter-filter area (between the first and second filters) is the same as the head pressure to the first filter, and thereby absolutely precludes feed fluid ever leaving the first filter to pass to the second filter.

Viewed from another perspective, a Call embodiment without brine seals has no downstream inlet because there is no upstream and downstream filters between which there could be an inlet. As the examiner correctly pointed out that removing the brine seal in Call would result in a system that "opens up a parallel flow path" (Advisory Action page 2, second full paragraph). Such a system is completely inconsistent with a serial flow of fluid from an upstream filter, through an inlet, to a downstream filter. This conclusion is required by the downstream inlet recited in the claims (also referred to as a "restriction orifice"), being defined as one that "lowers the pressure of additional feed fluid entering [the] inter-filter space" (specification, page 9, first full paragraph). Thus, removing the brine seal in Call produces a parallel flow into the various filters in which there is no upstream or downstream filters, (let alone a downstream inlet), while the claimed invention requires a serial flow in which fluid flows from an upstream filter, through an inlet, to a downstream filter.

A downstream inlet is not necessarily present in Call

Whether a downstream inlet is inherent in Call depends upon whether it is *necessarily present* in Call. The evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991) (emphasis added). As can be seen from the attached figures, a downstream inlet exists in the present claims (Figure 3), but not in the teachings of Call (Figure 2). The structural existence of a downstream inlet produces different results from that of a system simply lacking a brine seal, which means that Call's teaching of a multifilter embodiment without brine seals does not necessarily result in the claimed subject matter.

Thus, while there may be a remote possibility that an embodiment without a brine seal would allow feed to exit one filter and flow into another under certain circumstances, such a possibility is not sufficient for a finding of inherency. "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.* at 1269 quoting *In re Oelrich*, 666 F.2d 578, 581 (C.C.P.A. 1981). Accordingly, a downstream inlet cannot be said to be necessarily present in Call.

Conclusion Of Argument

In order for an element to be inherent in a disclosure, the element must be enabled and necessarily present. It is neither. Therefore, the applicant respectfully requests that the claim rejections be withdrawn.

VIII. Claims Appendix

1. (previously presented) A filtration system comprising:
   an elongated outer casing defining an outer lumen;
   a plurality of elongated inner casings disposed within the outer lumen, each of the inner casings having an inner lumen in which is disposed an upstream filter and a downstream filter, each of the inner casings also having an upstream inlet

positioned upstream of the upstream filter, and a downstream inlet positioned downstream of the upstream filter and upstream of the downstream filter; and

the outer casing, inner casings, and filters disposed relative to one another to define a feed fluid flow path in which a feed fluid that entered an inner casing via an upstream inlet and is exiting from an upstream filter into a downstream filter is diluted by additional feed fluid flowing into the inner casing through the downstream inlet.

2. (previously presented) The filtration system of claim 1 wherein the downstream inlet of an inner casing is a pressure reducing orifice adapted to cooperate with one or more other inlets to cause 50%-70% of feed fluid flowing through the inner casing to enter the upstream filter.

3. (original) The filtration system of claim 2 wherein the opening is dimensioned to produce a maximum operational pressure drop of about 20%.

4. (previously cancelled)

5. (previously cancelled)

6. (previously presented) The filtration system of claim 1 further comprising a manifold fluidly coupling the inner lumen of each of the inner casings, and another manifold fluidly coupling the core space of each of the inner casings.

7. (original) The filtration system of claim 6 having opposite ends, and both of the manifolds extending from the same one of the opposite ends.

8. (original) The filtration system of claim 1 wherein at least one of the inner casings contains a plurality of the filters serially disposed to provide a substantially continuous core space, and wherein a permeate flow path extends through the substantially continuous core space.

9. (original) The filtration system of claim 8 wherein the serial disposition of the filters in at least one of the inner casings defines a substantially continuous annular space between an inner wall of each of the inner casings and the filters disposed within the inner casings.

10. (original) The filtration system of claim 1 wherein at least one of the filters is spiral wound.

11. (original) The filtration system of claim 1 wherein at least one of the filters comprises hollow fiber membranes.

12. (original) The filtration system of claim 1 further comprising an energy recovery device that derives energy from a waste fluid in the waste fluid flowpath.

13. (original) The filtration system of any one of claim 1 wherein the outer casing is disposed substantially above ground.

14. (original) The filtration system of claim 1 having a coupling/filter ratio $\leq$1:2.

15. (original) The filtration system of claim 1 having a coupling/filter ratio $\leq$1:3.

16. (original) The filtration system of claim 1 having a coupling/filter ratio $\leq$1:4.

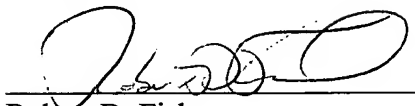
17. (previously presented) A filtration system comprising:
an elongated outer casing defining an outer lumen; and
a plurality of elongated inner casings disposed within the outer lumen, at least one of the inner casings having an inner lumen in which is disposed an upstream and a downstream filter, such that substantially all of a waste fluid exiting the upstream filter is directed as a feed fluid into the downstream filter, and is supplemented by additional feed fluid entering the inner lumen through a downstream inlet at a point between the upstream filter and downstream filter.

18. (previously presented) The filtration system of claim 17 wherein 50%-70% of any feed fluid entering the at least one of the inner casings enters the inner casing upstream of the upstream filter, and 50%-30% of the feed fluid entering the same inner casing enters at a point downstream of the upstream filter.

IX. Evidence Appendix

X. Related Proceedings Appendix

Respectfully submitted,



Dated: April 26, 2005

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IX. APPENDIX

What is claimed is:

1. (previously presented) A microprocessor programmed to (a) calculate an accumulated watering need for an irrigation zone, and (b) control irrigation to the zone using an automatically varied frequency of irrigation and an automatically varied cycle amount, wherein the cycle amount on watering days falls between a user controllable maximum threshold, and a user controllable non-zero minimum threshold, and wherein the user sets both the minimum threshold and the maximum threshold as a duration of time.

2. (original) The microprocessor of claim 1, wherein the cycle amount is at least partly derived from ETo data.

3. (original) The microprocessor of claim 2, wherein the ETo data comprises potential ETo data.

4. (original) The microprocessor of claim 2, wherein the ETo data comprises estimated ETo data.

5. (original) The microprocessor of claim 2, wherein the ETo data comprises historical ETo data.

6. (original) The microprocessor of claim 1, wherein the minimum threshold varies during a period of 12 consecutive months.

7. (original) The microprocessor of claim 6, wherein the minimum threshold varies as a function of time of year.

8. (original) The microprocessor of claim 6, wherein the minimum threshold varies as a function of crop maturity.

9. (original) The microprocessor of claim 1, wherein the cycle amount substantially equals an accumulated ETo value(s) at least once during a calendar year.

10. (original) The microprocessor of claim 1, wherein the cycle amount substantially equals the maximum threshold at least once during a calendar year.

11. (original) The microprocessor of claim 1 wherein the microprocessor is further programmed to control the irrigation to the zone using an automatically varied day schedule.

12. (original) The microprocessor of claim 11, wherein the automatically varied day schedule comprises an adjustment from daily to every other day irrigation frequencies.

13. (original) The microprocessor of claim 11, wherein the automatically varied day schedule comprises an adjustment from every other day to weekly irrigation frequencies.

Figure 1

Call with brine seals

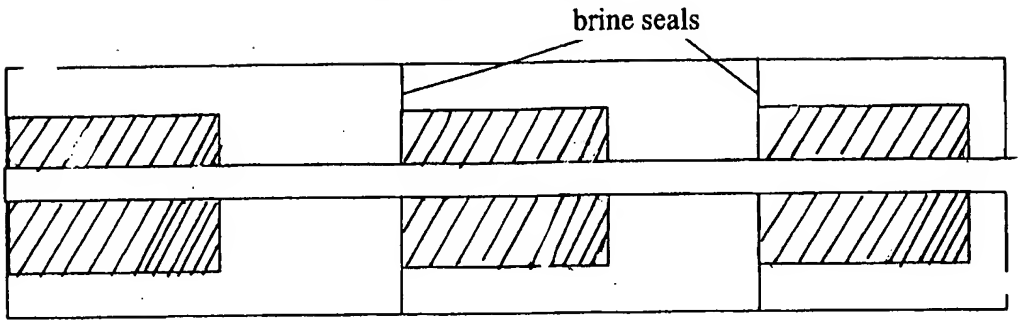

Figure 2

Call without brine seals

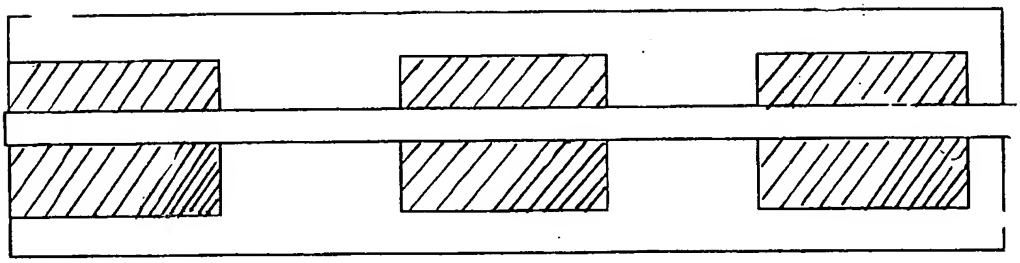

Figure 3

A System With
Downstream Inlets